NKDEP Laboratory Working Group Conference Call

Meeting Summary

June 12, 2003
3:30-4:30

Participants:
Tom Hostetter, MD - NKDEP Director
Elisa Gladstone, MPH - NKDEP Associate Director
Gary Myers, PhD - CDC
Neil Greenberg, PhD - Ortho Clinical Diagnostics
Greg Miller, PhD – Virginia Commonwealth University
Michael Welch - NIST
Harvey Kaufman, MD - Quest Diagnostics Nichols Institute
Josef Coresh, MD, PhD – Johns Hopkins Medical Institutions
Andy Levey , MD – Tufts New England Medical Center
Tom Parker, MD - ?
John Eckfeldt, MD, PhD – University of Minnesota
T.G. Patel, MD, MACP – Veterans Health Administration

Introductions

Dr. Hostetter began the call by confirming that this particular lab committee is an official workgroup of NKDEP that will aim to reduce the uncertainty of the laboratories' methodology of estimating kidney function. Dr. Hostetter introduced two members new to the lab group, Ms. Elisa Gladstone and Dr. Tom Parker. Ms. Elisa Gladstone has been the Associate Director for NKDEP for several months. She earned her M.P.H from the University of North Carolina. Dr. Tom Parker is a well-known nephrologist from Dallas and has most recently organized "An Initiative of CKD."

Goals

Dr. Hostetter shared with the group that there is a short-term and long-term goal in changing the reporting of estimated GFR. The short-term goal would involve sending a letter to members of the various kidney societies, such as the American Society of Nephrologists, National Kidney Foundation, Renal Physicians Association, American Society of Pediatric Nephrology, and the American Society of Transplantation, signed by the Presidents of these organizations, urging them to ask their laboratories to begin reporting estimated GFR using a standard equation. The group concurred that, along with the letter, nephrologists would need to receive supporting materials to provide to their laboratories such as the exact approved standard equation, the NKDEP PCP fact sheet (which has a full page on why the GFR may be useful), and Dr. Levey's brochure, which has already been distributed in Pittsburgh to Lab Corp. Dr. Miller also recommended including in the letter the requirement that labs report separate ranges for African Americans and Whites. Currently, lab information systems do not have race variables. Quest Diagnostics approaches this issue by multiplying the GFR by 1.212, rather than reporting dual numbers on the report. Dr. Hostetter would be willing to create a mock-up report with both

options; however, he wants to avoid making it too complicated. He suggested including, if African American then X, if Caucasian then Y, and then also have a section with GFR x 1.212.

In addition to the letter, another short-term option that was explored by the group was publishing an article in *JAMA* outlining the need for a gold standard for the GFR equation. The article would be a collaborative effort among the lab workgroup members. Dr. Hostetter will contact the Deputy Director, Drummond Rennie, to express the group's intent. [Since the conference call, Dr. Hostetter has contacted Dr. Rennie who has expressed an interest in the group's article.]

The long-term goal referenced by Dr. Hostetter will involve more complicated measures such as traceability/gold standard for improving the creatinine assay and improving an estimated equation for GFR. The group concurred that the short-term goal is feasible, while the long-term goal will take a while to implement.

Recommendations Based on Current Practices

Dr Levey agreed that the short-term goal is necessary based on his experience. He stated that an action plan based on diagnosis for CKD is not going to change and will remain an estimated GFR below 60. He believes an agreement needs to be reached without changing the calibration factor because these prediction equations do fairly well in estimating GFR below 60.

Dr. Patel believes that the labs need to be given one equation to estimate GFR. VA currently uses race, age, sex, weight, and serum creatinine. Dr. Hostetter mentioned that NKDEP will have that version of the equation on the website that will eventually be downloadable to PDA's. Quest Diagnostics and Lab Corp have indicated that they would like a standard equation that can be agreed upon across the board.

In order to avoid "squishy" numbers, Dr Hostetter suggested that laboratories that are not calibrating report that GFR is estimated to be below 60 ml/min or is estimated to be above 60 ml/min and leave it at that. The group concurred that this is going to be fairly accurate at lower levels, but not above 60 ml/min. Dr. Levey suggested that when reporting numbers above 60 ml/min to just report "above 60," but for those below 60, report the actual number since this is going to be fairly accurate. There was a unanimous consensus for Dr. Levey's suggestion.

Dr. Coresh reiterated that 24-hour urines will not help clarify the levels above 60.

Another issue the group discussed was the reporting of creatinine and if it should be just two digits past the decimal point if less than 1. It is not necessary to ask labs to do that now since it is not a top priority. However, when meeting with manufacturers, this issue should be included.

A workgroup member noted that Lab Corp provides GFR with the serum creatinine when GFR is requested. Clients have to specifically order it as an "opt in" as opposed to an "opt out" NKDEP may recommend doctors always choose the "opt-in" to get the GFR calculation and make it a routine part of reporting. Lab Corp is currently discussing whether they may go to reporting GFR whenever serum creatinine is ordered as opposed to just when requested. Dr. Levey does not think that we can approach this issue right now in the short-term phase. Dr. Hostetter said that

we could consider giving the physicians the opt in/opt out option if it does not complicate the message.

Supporting Evidence and Research

Dr. Levey mentioned that the *Annals of Internal Medicine* will be publishing a review of the NKF guidelines for early detection of CKD on July 15th. This will be a summary of the first five guidelines in K/DOQI, which supports estimating GFR rather than using serum creatinine. Dr. Levey can send this review to Dr. Hostetter for him to craft a new message for *JAMA*. Dr. Levey suggested using this as support for the position paper for *JAM*A. Dr. Hostetter agreed; however, he would like to make the article to send to *JAMA* newsworthy.

Dr. Patel stated that the VA will be pilot testing a GFR equation, and he will share his findings with Dr. Hostetter and the group. These could also be used as supporting research in the *JAMA* article.

Next Steps in Improving the Standards for Assay

Dr. Hostetter revisited the issues that were discussed at the January meeting for how to move forward in terms of improving traceability of the procedure. Five points were identified that would be useful to do to work with the joint committee on traceability in laboratory medicine. Dr. Hostetter commented that it would be remiss if the group did not keep improving the assay. However, there is a need to determine action steps to develop a more uniform assay.

Dr. Greenberg strongly recommended formally constituting a lab standardization subcommittee with the intent of creating a report on the state of performance in ways of improving the assay. Dr. Eckfeldt thought that would tie in well with the recommendation to report the GFR but at the level of 60 ml/min and below. The method's specific biases may be large or small and will make it hard to standardize the assay. This will result in the need for a better reference system and reference materials.

It was suggested that the lab group reconvene Thursday morning, July 24, at the AACC conference. Dr. ? will contact AACC about available meeting space and time. Additionally, it was suggested that another one to two-day meeting be held to discuss further plans.

Dr. Myers referred to the cholesterol program and how they reference what the Government should do, what labs should do, and what industry should do. Dr. Hostetter will review the report and use that template to write an outline and present a draft at the July meeting.

The College of American Pathologists (CAP) chemistry survey this fall is going to have a fresh frozen specimen at normal creatinine levels so they can actually test the methods. A caveat on how best to use them needs to be considered, but the panel can come up with recommendations based on the results. Currently, CAP is doing a small pilot of linearity [??] material with a range of 0.8 to 3.0 using six different calibrators. The idea is that this would be an on-going program for labs to check on how they are doing and how reference materials are working. Dr. Hostetter commented that he thinks it is a useful clinical range to test. Currently, CAP would like to work

on the principal aspect of the pilot. Assuming it works, they would sell it as a product. If money was made available to make more of this product, it could be a huge opportunity to jump start labs to achieve a level of standardization that is not possible today. Dr. Hostetter does not want to over promise; however, this may be an opportunity the group may want to look into.

Dr. Hostetter concluded the call by thanking the workgroup for their expertise and time.

In conclusion, the following action items resulted from the call:

- Dr. Patel will send the Veterans Administration report asking labs to provide GFR below 60 and estimate above 60.
- Dr. Miller will send Dr. Hostetter a copy of the cholesterol report in order to prepare an outline for the July meeting at the AACC conference.
- The Lab Group will meet on July 24 [??] at the AACC conference in Philadelphia.
- Dr. Hostetter will look into possible financial resources for support after the College of American Pathologists has completed their pilot study. Dr. Eckfeldt can put someone in touch with Tom to discuss this.
- Dr. Levey will provide Dr. Hostetter with the first five K/DOQI guidelines.
- A four-variable GFR calculator will be promoted consisting of the four variables: age, sex, race, and creatinine.